

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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Federal Communications Commission
Office of Secretary

In the Matter of

Amendment of the Commission's
Rules to Permit Flexible Service
Offerings in the Commercial
Mobile Radio Services

WT Docket No. 96-6

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To: The Commission

COMMENTS

OF

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SUMMARY

In this proceeding, the Commission is seeking comment on, among other things, flexible service offerings in Commercial Mobile Radio Services ("CMRS"), and additional guidelines necessary for determining the types of services that should be classified as CMRS.

Metricom, Inc. ("Metricom"), a pioneer in the development of leading-edge, frequency hopping, spread spectrum, Part 15 packet radio systems, demonstrates in these Comments that a service provided by Part 15 devices can meet the definition of CMRS because it offers: (1) a mobile service; (2) provided for profit; (3) interconnected with the public switched network; and, (4) available to the public. Therefore, Metricom asserts that such services, even though they are provided by Part 15 devices, should be classified as CMRS.

The classification of these services as CMRS will promote both the Congress' and the Commission's goals of fostering the rapid introduction of new technologies and services. Without the CMRS classification, services that otherwise meet the definition of CMRS could be faced with regulatory inequities.

Metricom also argues in its Comments that classification of a qualified Part 15 service as CMRS is consistent with the statutory language and history of Section 332(c) of the Communications Act, and that the CMRS classification requested would not have any impact on other Part 15 operations in designated spectrum, or change the status of Part 15 operations in any way.

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Metricom, Inc., ("Metricom"), by its attorneys, pursuant to § 1.415 of the Commission's rules, hereby submits these Comments in response to the Further Notice of Proposed Rule Making issued in the above-referenced proceeding.^{1/} In the *Further Notice*, the Commission is concerned, among other things, with flexible service offerings in the Commercial Mobile Radio Services ("CMRS") and the additional guidelines necessary for determining when certain types of services may fall within the scope of CMRS regulation.^{2/}

In addition, the Commission is seeking comment on the definition of "mobile service" as that term is defined for purposes of CMRS, as well as the regulation of service providers

¹Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services, *First Report and Order and Further Notice of Proposed Rule Making*, FCC 96-283, rel. Aug. 1, 1996; 61 Fed. Reg. 43721 (Aug. 26, 1996) ("*Further Notice*" or "*First Report and Order*").

^{2/}Further Notice at ¶ 47.

as CMRS.^{3/} Metricom is filing these comments to request that the Commission, while expanding the scope of services which can be classified as CMRS, clarify that a service which meets the definition of CMRS can qualify as a CMRS if the service is provided by Part 15 devices in Part 15 spectrum bands.^{4/}

I. INTRODUCTION

1. Founded in 1985, Metricom is a young, rapidly growing, technologically innovative company based in Silicon Valley. Encouraged by Commission actions in various Part 15 proceedings, Metricom has become a pioneer in the development of state-of-the-art, frequency hopping, spread spectrum packet radio systems. Metricom has invested significant time and resources to develop, manufacture and market sophisticated RF devices that operate on an unlicensed basis pursuant to Part 15 of the Commission's rules. Metricom has developed a variety of uses for its innovative spread spectrum packet technology.

2. Specifically, Metricom has developed Part 15 devices which enable the offering of a wireless data transmission service -- called Ricochet^{5/} -- to the public. Ricochet service employs

^{3/}Further Notice, ¶¶ 49, 57.

^{4/}The Commission has held previously that Part 15 devices do not constitute CMRS, see discussion *infra.* at ¶ 8. Metricom is not attempting to include unlicensed devices within the definition of CMRS; rather, it asserts that services which are provided by Part 15 devices and meet the definition of CMRS, should be designated CMRS.

^{5/}Ricochet is a registered trademark of Metricom, Inc.

Part 15 devices to provide a combination of mobile and fixed services to subscribers. Because the Commission is seeking comment in this proceeding related to permitting flexible service offerings in CMRS, and what constitutes "mobile service" pursuant to § 332 of the Communications Act, Metricom is filing these comments to illustrate that a service, like Ricochet, is clearly CMRS and should be designated and regulated as such.

II. DESCRIPTION OF SERVICE

3. Ricochet is a data transmission service that provides local-area and wide-area radio frequency ("RF") connectivity to computers and modems, at end-user data rates of approximately 28.8 kbps, in a variety of manners. A Ricochet subscriber connects a small RF modem, about the size of a TV remote control, to the serial port of a computer. Using "off-the-shelf software," the subscriber is provided with the ability to remotely access the Internet (on an unlimited basis), send and receive electronic mail, access popular commercial on-line services like America Online and CompuServe, access other computers and other Ricochet modems, and interconnect with the public switched network ("PSN"). Ricochet service is available commercially in the Silicon Valley/San Francisco Bay, Seattle, and Washington, D.C. areas, as well as on several college campuses.

4. Metricom employs a microcellular architecture to provide Ricochet service with Part 15 devices. A Ricochet

subscriber's RF modem, a two-way mobile station,^{6/} communicates with nearby shoe box-sized, pole-top (fixed) units, which are generally mounted on street lights. The pole-top units relay the subscriber's transmission, via point-to-point (fixed) communications, to any one of many wired access points ("WAPs").^{7/} At the WAP, the subscriber's data is transferred to Metricom's high-speed frame relay (wired) data network, consisting of lines leased from various carriers, to the termination point designated by the subscriber. The subscriber's data may reach its termination point by means of additional RF transmission, interconnection with the PSN, or some other interconnection with a computer or computer service designated by the subscriber. Communications back to the subscriber work in the same way.

5. Metricom markets Ricochet, which currently has approximately 6,000 subscribers, consisting of commercial, government, individual and educational users. Ten colleges and

^{6/}A mobile station is defined as "a radio-communication station capable of being moved and which ordinarily does move." 47 U.S.C. § 3(28) (1996). The Ricochet modem is portable and it "moves," and it also works while it is in motion.

^{7/}The Commission has determined that services having both fixed and mobile capabilities fall within the definition of "mobile service" in the Communications Act, and can therefore qualify as CMRS. See *First Report and Order* ¶ 7; see, also, *Implementation of Sections 3(n) and 332 of the Communications Act*, GN Docket No. 93-252, *Second Report and Order*, 9 FCC Rcd 1411, 1424-1425 (1994); 47 C.F.R. § 20.7 (1995).

universities are using Ricochet,^{8/} and approximately 275 RF modems are currently being used in K-12 schools in the San Francisco Bay area.

III. PART 15 SERVICES SUCH AS METRICOM'S RICOCHET SERVICE SHOULD BE CLASSIFIED AS CMRS

6. In considering the types of services which should be classified as CMRS in this proceeding, services similar to Metricom's Ricochet service, which meet each of the four required definitional elements of CMRS, should be classified as CMRS, even though they employ Part 15 devices.^{9/} The Commission's rules define CMRS as: (1) a mobile service that is (2) provided for profit; (3) interconnected with the PSN; and (4) available to the

^{8/}Ricochet networks are installed at Austin College, California Polytechnic University, Oregon State University, San Francisco State University, Stanford, University of Oregon, University of Miami, University of California at Berkeley, University of California at Santa Cruz, and George Washington University.

^{9/}Because the provision of wireless access to the Internet and national on-line services is an *interstate access service* and thus exclusively within the Commission's jurisdiction, Metricom believes Ricochet's primary function is not subject to state PUC regulation regardless of whether Ricochet is categorized as CMRS. (See Bell Atlantic Telephone Companies Offer of Comparably Efficient Interconnection to Providers of Internet Access Services, Order, DA 96-891, rel. June 6, 1996, ¶¶ 48-51.) However, it is conceivable that a state PUC might claim regulatory jurisdiction over the modem-to-modem communication function in situations where both modems are within the same state at the time the communication occurs, or when a state PUC challenges Metricom's analysis that the interstate service provided is not subject to state regulation. Accordingly, designation as CMRS for Ricochet service would alleviate potential barriers at the state level.

public.^{10/}

A. Mobile Service

7. The Communications Act defines mobile service as "a radiocommunication service carried on between mobile stations or receivers and land stations, and by mobile stations communicating among themselves, and includes (A) both one-way and two-way radio communication services, (B) a mobile service which provides a regularly interacting group of base, mobile, portable and associated control and relay stations (whether licensed on an individual, cooperative, or multiple basis) for private one-way or two-way land mobile radio communications by eligible users over designated areas of operation; and (C) any service for which a license is required in a personal communications service established pursuant to the proceeding entitled "Amendment of the Commission's Rules to Establish New Personal Communications Services" ... or any successor proceeding."^{11/}

8. In 1994, at the urging of Metricom, the Commission held in defining CMRS that Part 15 devices were not included within the definition of "mobile service" because they were not "licensed" and, therefore, these devices could not be included

^{10/47} C.F.R. § 20.3 (1995). The Commission amended its rules in the *First R&O* to allow certain CMRS providers to offer fixed wireless services on their assigned spectrum on a co-primary basis with mobile services. *First R&O* at ¶ 2.

^{11/47} U.S.C. § 153(27) (1996).

within the definition of CMRS.^{12/} At the time Metricom requested Part 15 devices not be regulated as CMRS, neither it nor any other entity, to the best of Metricom's knowledge, was offering a radio communication service, interconnected with the PSN, to the public using Part 15 devices. Ricochet service, believed to be the first interconnected service offered to the public with Part 15 devices, was not commercially available until September of 1995.

9. On its face, the Commission's holding in 1994 that Part 15 devices are not CMRS appears correct because CMRS describes a type of communications service, and a device or transmitter could not rationally be regulated as a service. However, the law and other circumstances have changed since that time, and the Commission's *Further Notice* in this proceeding presents an opportunity to clarify that a service employing Part 15 devices can be classified as CMRS.

10. One of the reasons why the Commission declared that Part 15 devices should not be subject to CMRS regulation was the desire not to impose regulatory constraints upon Part 15 operations, and to foster the rapid introduction of new technologies without regulatory delays.^{13/} However, with the implementation of the Telecommunications Act of 1996, CMRS

^{12/}See Implementation of Sections 3(n) and 332 of the Communications Act -- Regulatory Treatment of Mobile Services, *Second Report and Order*, 9 FCC Rcd 1411, 1424 (1994) ("*Second CMRS Order*") ¶ 37.

^{13/}*Id.*

regulation now provides for less regulatory constraints than other forms of regulation. Without the CMRS classification, services such as Ricochet could face regulatory restrictions on state and local levels.^{14/} Providing the classification requested would avoid inequitable and potentially burdensome state public utility commission regulation of Ricochet service. Under Section 332(c)(3) of the Communications Act, those who provide CMRS are not subject to state public utility commission regulation, whereas those that provide non-CMRS are potentially subject to state regulation.^{15/} A policy that requires compliance with a patchwork quilt of state regulations would be a substantial barrier to the widespread offering of services provided by Part 15 devices.

11. At paragraph 49 of the *Further Notice*, the Commission seeks comment on alternative statutory interpretations for the definition of "mobile services" in the Communications Act. In considering whether a service using Part 15 devices meets the definition of a "mobile service," it is not necessary to seek an alternative interpretation because the Part 15 devices are, in fact, "licensed" devices pursuant to the definition of that term

^{14/}In the *First Report and Order*, the Commission recognized that allowing service providers to offer all types of CMRS services, in response to market demand, will allow "more flexible responses to consumer demand, a greater diversity of services and combination of services, and increased competition . . . consistent with the goals of the 1996 Act, which seeks to increase competition between the various providers of telecommunications services . . ." *First Report and Order* at ¶ 22.

^{15/}47 U.S.C. § 332(c)(3) (1996).

in the Communications Act.^{16/} Under this definition, a "station license" or "license" is an "instrument of authorization required by this Act or the Rules and Regulations of the Commission made pursuant to this Act, for the use or operation of apparatus for transmission of energy, or communications or signals by radio by whatever name the instrument may be designated by the Commission."^{17/} Pursuant to this definition, therefore, a "license" is the required authorization to use or operate a device which transmits RF energy for communications purposes, and the statute does not specify what the Commission must call this authorization. Accordingly, while a Part 15 intentional radiator device such as Metricom's Ricochet modem is not issued what is traditionally known as a license, before that device can transmit RF energy for communications purposes, it must receive equipment authorization from the Commission.^{18/} However it is termed, this equipment authorization constitutes a license, and services employing authorized Part 15 devices can be included within the

^{16/}When the Commission found that Part 15 devices were not included within the definition of "mobile services," it was not aware of any potential CMRS services that were being offered with Part 15 devices, nor was it focusing on the definitional aspects of the term "license." Rather, the Commission was focusing on the fact that individual devices are not services, and it was interested in making these devices rapidly available to the public without any additional regulatory burden.

^{17/}47 U.S.C. § 3(42) (1996).

^{18/}See 47 C.F.R. § 15.201 (1995).

definition of "mobile services."^{19/}

B. Service is Provided for Profit

12. Ricochet service is provided for profit. A service is provided for profit when it is offered with the intent of receiving compensation or monetary gain.^{20/} Metricom charges Ricochet subscribers a monthly fee to access the Internet, commercial on-line services, and other computers/modems via the PSN. Generally, Ricochet subscribers pay \$29.95 per month for unlimited Internet access plus \$10 per month to rent a modem (or \$299 to purchase the modem) and a \$45 one-time activation fee.

C. Service is Interconnected with the PSN

13. Ricochet also offers interconnected service in accordance with the Commission's rules. The Commission's rules define interconnected service as one that "gives subscribers the ability to transmit and receive messages to and from the public switched network."^{21/} In interpreting this definition, the Commission has stated, "a mobile service will be considered to be

^{19/}This analysis is fundamental to the question of whether Ricochet, or a similar service, falls within the definition of "mobile services" for the purposes of qualifying as CMRS. This analysis does not advocate that the status of any Part 15 operations, in Part 15 frequency spectrum, should be modified in any way. The designation of a service as CMRS should have no impact on the operation or status of that particular service within Part 15, and the provisions of § 15.5 of the Commission's rules would continue to be fully applicable regardless of whether a Part 15 service were designated as CMRS.

^{20/}Second CMRS Order, 9 FCC Rcd at 1427.

^{21/}47 C.F.R. § 20.3 (1995); Second CMRS Order, 9 FCC Rcd at 1434.

offering interconnected service even if the service allows subscribers to send or receive messages to or from anywhere on the PSN, but only during specified hours of the day."^{22/} The Commission has also noted that services indirectly interconnected to the PSN through an interconnected CMRS, such as a cellular carrier, will be deemed to be interconnected services because messages could be sent to, or received from, the PSN via the cellular carrier.^{23/} Ricochet allows subscribers to send and receive messages using the PSN through interconnection with the PSN.

D. Service is Available to the Public

14. Finally, Ricochet service is available to the public. Under the Commission's definition, service is available to the public if the service is offered to the public without restriction on who may receive the service.^{24/} Similarly, the Commission has concluded that if a licensee "operates a system not dedicated exclusively to internal use, or provides service to users other than eligible user groups ..., it is offering service that is 'effectively available to the public.'"^{25/} Ricochet service is available to the public in several states and the District of Columbia. Metricom advertises in its service areas

^{22/}Second CMRS Order, 9 FCC Rcd at 1434-35.

^{23/}Second CMRS Order, 9 FCC Rcd at 1437.

^{24/}Second CMRS Order, 9 FCC Rcd at 1439.

^{25/}Second CMRS Order, 9 FCC Rcd at 1441 (emphasis in original).

that Ricochet service is available to anyone who requests the service on advertised terms. In addition, Ricochet is not restricted to any class of users, but rather, is available both to anyone wishing to subscribe to the service within the Ricochet service areas, and to individuals wishing to use the modem-to-modem communications functions outside of a networked Ricochet service area.

IV. CLASSIFICATION OF A PART 15 SERVICE AS CMRS WILL HAVE NO IMPACT ON OTHER PART 15 OPERATIONS

15. CMRS is a service which is regulated pursuant to specific rules. It should not make any difference in what frequency band CMRS is provided because it is the service, not the spectrum, which is regulated as CMRS. An examination of the statutory history of § 332(c) of the Communications Act (Regulatory Treatment of Mobile Services) makes this abundantly clear. House Report No. 103-11 states:

This section amends section 332(c) to provide that services that provide equivalent mobile services are regulated in the same manner. It directs the Commission to review its rules and regulations to achieve regulatory parity among services that are substantially similar.^{26/}

16. The Commission agrees. In recognition of the fact that it is the service which is regulated without regard to the spectrum in which the particular service operates, the Commission offers the example of the Basic Exchange Telecommunications Radio

^{26/} H. Rep. No. 103-111, at 259 (1993), reprinted in 1993 U.S.C.C.A.N. 572, 586.

Service ("BETRS") in the *Further Notice*. While BETRS operates in a band designated for "mobile" operations, where CMRS operations are prevalent, the Commission has determined that BETRS is a fixed service, and therefore is not subject to CMRS regulation. The Commission stated that:

The regulatory structure for providers of the primary service to which the spectrum is allocated does not necessarily dictate the type of regulation to which every service provider in that same band will be subject regardless of the particular attributes of that service.^{27/}

17. The Commission also explained that it did not intend to base its decision in this proceeding merely on the classification of the majority of users in a particular frequency band.^{28/} Accordingly, it is clear that the type of service which is being provided is the determinative factor in establishing whether a provider is offering CMRS. If the definition of the service is met, then CMRS can be provided in any frequency allocation. The fact that CMRS is being provided in frequency bands allocated for Part 15 operations is irrelevant. CMRS operations in frequency bands allocated for Part 15 operations will have no affect on other (non-CMRS) operations in the band. Therefore, there should be no impediment to designating services which meet the definition of CMRS as CMRS, even though those services are being provided with Part 15 devices.

^{27/}*Further Notice* at ¶ 52.

^{28/}*See Further Notice* at ¶ 52.

V. **CONCLUSION**

WHEREFORE, the premises considered, Metricom respectfully requests that the Commission clarify that a service is CMRS if it is provided using Part 15 devices so long as the service complies with the definition of CMRS.

Respectfully submitted,

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